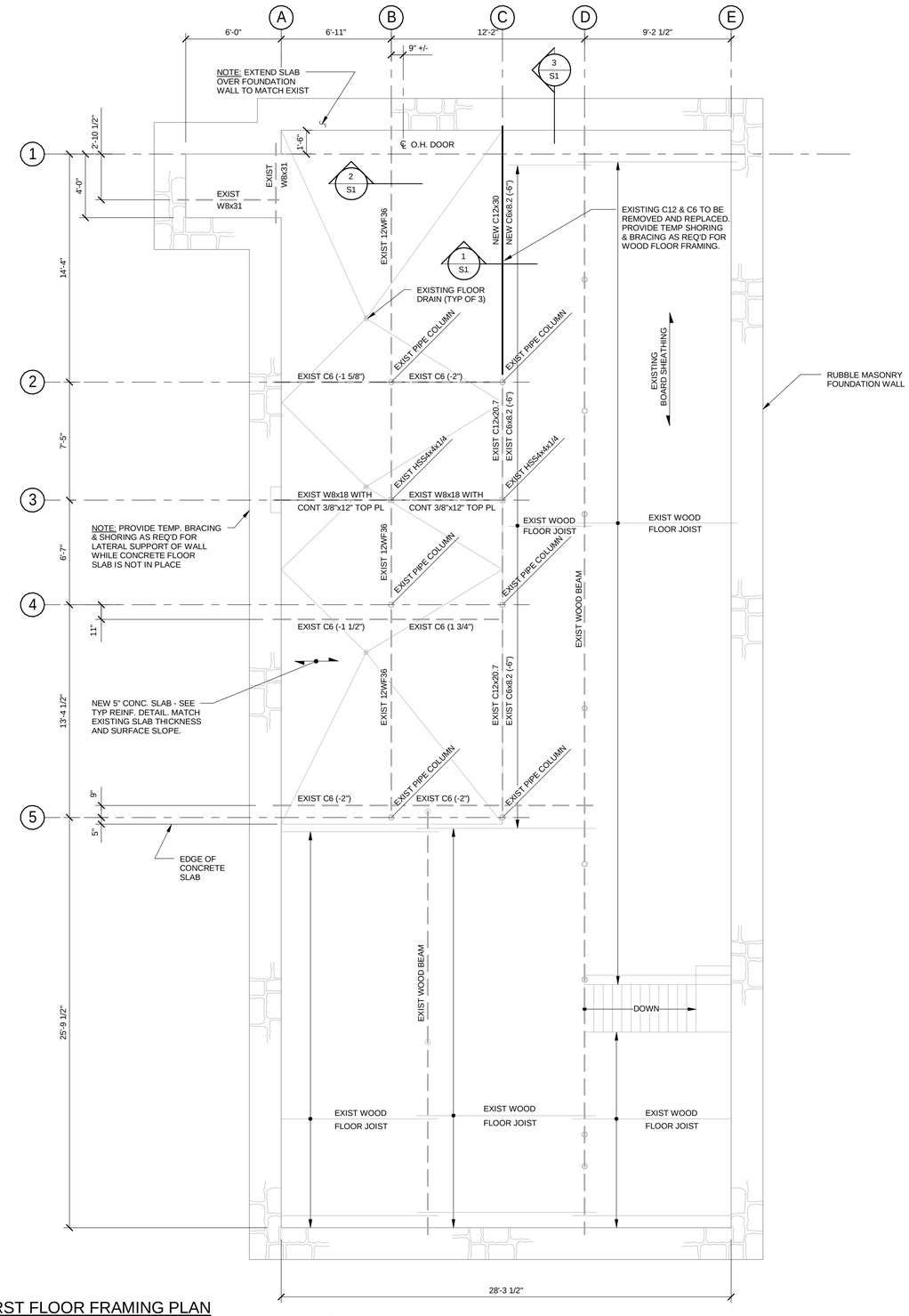
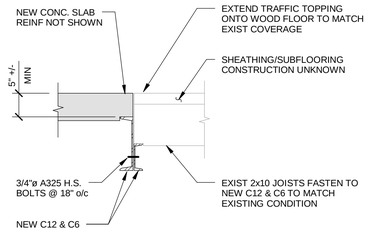


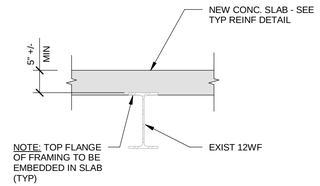
FIRST FLOOR FRAMING PLAN

1/4" = 1'-0"

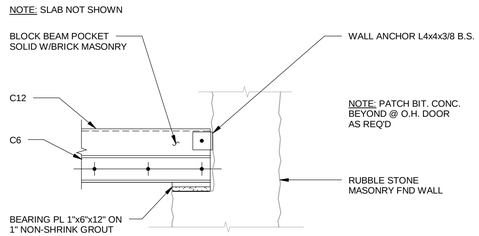
1. FRAMING SHOWN IS EXISTING UNLESS NOTED OTHERWISE.
2. TOP OF STEEL EL. 0'-0", TYPICAL UNLESS NOTED (+/-).
3. WOOD FRAMING SHOWN FOR REFERENCE ONLY.
4. REMOVE AND REPLACE EXISTING FLOOR DRAINS WITH SIMILAR ITEM.



1/S1 SECTION
3/4" = 1'-0"



2/S1 SECTION
3/4" = 1'-0"



3/S1 SECTION
3/4" = 1'-0"

SCOPE OF WORK

THE PURPOSE OF THIS PROJECT IS TO ADDRESS DETERIORATION OF THE EXISTING APPARATUS ROOM FLOOR STRUCTURE AT BURLINGTON FIRE STATION #3. THE PROJECT CONSISTS OF DEMOLITION AND REPLACEMENT OF THE APPARATUS ROOM CONCRETE FLOOR SLAB, REPLACEMENT OF CORRODED STRUCTURAL STEEL FRAMING AND APPLICATION OF ELASTOMERIC HEAVY DUTY TRAFFIC SYSTEM.

THE PROJECT HAS A BASE BID AND ONE ALTERNATIVE AS FOLLOWS:

BASE BID: CONCRETE REINFORCING STEEL AND ACCESSORIES TO BE EPOXY COATED.
ALTERNATE BID: CONCRETE REINFORCING STEEL AND ACCESSORIES TO BE UNCOATED.

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PROFESSIONAL SEAL

STATE OF VERMONT · RICHARD W. DAIL · No. 3417 · REGISTERED PROFESSIONAL ENGINEER

NO.	DESCRIPTION	DATE	BY	CK'D

BURLINGTON FIRE STATION NO. 3
20 MANSFIELD AVE.
BURLINGTON, VT

SHEET TITLE

FRAMING PLAN

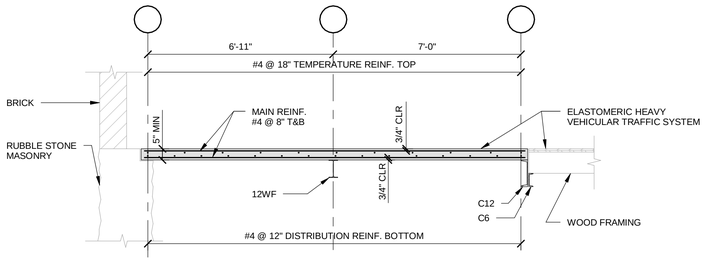
DRAWN BY	DATE
LAR	07/10/14
CHECKED BY	D&K PROJECT #
RWD	522529L
PROJ. ENG.	D&K ARCHIVE #
RWD	

SHEET NUMBER

S1

SHEET 1 OF 2

I:\522529L Burlington Fire Station #3\Revit\BTV FS No 3 Structural Drawings.rvt 7/10/2014 11:04:07 AM



TYPICAL SLAB REINFORCING DETAIL

3/8" = 1'-0"

GENERAL

1. USE STRUCTURAL DRAWINGS IN CONJUNCTION WITH THE SPECIFICATIONS AND ARCHITECTURAL, ELECTRICAL, MECHANICAL AND SITE DRAWINGS.
2. ALL WORK SHALL BE IN ACCORDANCE WITH APPLICABLE CODES, STANDARDS, AND REGULATIONS.
3. DIMENSIONS SHALL NOT BE SCALED FROM DRAWINGS.
4. DETAILS SHOWN ARE TYPICAL. SIMILAR DETAILS APPLY TO SIMILAR CONDITIONS UNLESS OTHERWISE NOTED.
5. CONTRACTOR SHALL VERIFY ALL EXISTING CONDITIONS AND DIMENSIONS AND REPORT DISCREPANCIES TO ARCHITECT/ENGINEER BEFORE PROCEEDING WITH THE WORK.
6. IN CASE OF DISCREPANCIES BETWEEN THE DRAWINGS AND THE SPECIFICATIONS, THE DRAWINGS GOVERN.

SHOP DRAWINGS AND PRODUCT DATA

1. SHOP DRAWINGS: SUBMIT TWO COPIES TO THE ARCHITECT/ENGINEER, ONE COPY WILL BE PROCESSED AND RETURNED.
2. PRODUCT DATA: SUBMIT TWO COPIES TO THE ARCHITECT/ENGINEER, MARKING EACH COPY TO INDICATE ACTUAL PRODUCT TO BE PROVIDED. ONE COPY WILL BE PROCESSED AND RETURNED.

CONCRETE

1. ALL CONCRETE SHALL CONFORM TO REQUIREMENTS AND RECOMMENDATIONS OF ACI 318 "BUILDING CODE REQUIREMENTS OF REINFORCED CONCRETE" AND ACI FIELD REFERENCE MANUAL SP-15.
2. CONCRETE WORK SHALL CONFORM TO ALL REQUIREMENTS OF ACI 301," SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDINGS," EXCEPT AS MODIFIED OR SUPPLEMENTED BELOW.
3. SHOP DRAWINGS AND DATA: SUBMIT SHOP DRAWINGS COMPLYING WITH ACI SP-66 "ACI DETAILING MANUAL" AND PRODUCT DATA FOR ACCESSORIES, ADMIXTURES AND CURING COMPOUNDS.
4. MIX PROPORTIONS AND DESIGNS SHALL BE SUBMITTED FOR APPROVAL.

CONCRETE STRENGTH	MIN. CEMENT	MAX. WATER	AIR
3.500 psi	540 lbs./cu.yd.	33 gals./cu.yd	6% +/- 2%

5. ALL CONCRETE SHALL BE STONE CONCRETE HAVING A MINIMUM COMPRESSIVE STRENGTH OF 3,500 PSI AT 28 DAYS FOR INTERIOR SLABS.
6. REINFORCING STEEL: ASTM A 615 GRADE 60 AND ASTM A 775 GRADE 60 FOR EPOXY COATED REINFORCING BARS.
7. FOR EPOXY COATED REINFORCING STEEL, PROVIDE EPOXY COATED REINFORCING ACCESSORIES.
8. ALL CONCRETE SHALL BE READY-MIX CONCRETE CONFORMING TO ASTM C 94 EXCEPT THAT ADDITION OF WATER WILL NOT BE PERMITTED.
9. ALL REINFORCING MARKED CONTINUOUS (CONT.) SHALL BE LAPPED 80 BAR DIAM. AT SPLICES AND CORNERS AND SHALL BE HOOKED OR EXTENDED 64 BAR DIAM. AT NON-CONTINUOUS ENDS.
10. THE CONTRACTOR SHALL CALCULATE AND INCLUDE ALL ADDITIONAL CONCRETE THAT MAY BE REQUIRED DURING PLACEMENT DUE TO DEFLECTION OF STRUCTURE.
11. REINFORCEMENT SHALL BE SECURELY TIED IN ITS PROPER PLACE BEFORE AND DURING CONCRETE PLACEMENT OPERATIONS USING APPROVED CHAIRS AND SPACERS AS REQUIRED.
12. FRAMED SLABS AND BEAMS SHALL BE PLACED MONOLITHICALLY EXCEPT WHERE SHOWN OTHERWISE AND SHALL BE FINISHED AS INDICATED IN THE SPECIFICATIONS. JOINTS IN FRAMED SLABS SHALL BE LOCATED SO THAT EACH INDIVIDUAL CONCRETE PLACEMENT DOES NOT EXCEED 60 FEET IN LENGTH. JOINTS SHALL BE PLACED AT POINTS OF MINIMUM SHEAR.
13. THE CONCRETE CONTRACTOR SHALL INSTALL OR GIVE OTHER TRADES AMPLE OPPORTUNITY TO INSTALL ALL ANCHORS, BOLTS, PLATES, NAILERS, SLOTS, CHASES, PIPE SLEEVES, ETC., AS REQUIRED BY THESE TRADES. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS BEFORE SETTING SCREEDS AND FORMS.
14. PROVIDE CLEARANCES FROM FACES OF CONCRETE TO REINFORCEMENT AS FOLLOWS (UNLESS NOTED OTHERWISE):
    - i. CONCRETE CAST AGAINST EARTH — 3" (ALL BARS)
    - ii. CONCRETE EXPOSED TO EARTH OR WEATHER — 2" (#6 AND LARGER); 1-1/2" (#5 AND SMALLER)
    - iii. CONCRETE NOT EXPOSED TO EARTH OR WEATHER:
        1. SLABS, WALLS AND JOISTS — 3/4" (#11 AND SMALLER)
        2. BEAMS AND COLUMNS (MAIN STEEL AND TIES) — 1-1/2" (ALL BARS)
15. ALL CONCRETE SHALL BE CONSOLIDATED USING MECHANICAL VIBRATING EQUIPMENT.
16. FORMED CONCRETE NOT EXPOSED TO VIEW SHALL RECEIVE A ROUGH FORM FINISH; FORMED CONCRETE EXPOSED TO VIEW SHALL RECEIVE A SMOOTH FORM FINISH.
17. CONCRETE SLABS SHALL RECEIVE A TROWELED FINISH FOR INTERIOR CONCRETE AND A BROOM FINISH FOR EXTERIOR CONCRETE.
18. TESTING: THE OWNER WILL EMPLOY A TESTING LABORATORY TO PERFORM TESTS FOR QUALITY CONTROL DURING PLACEMENT AS DIRECTED BY THE ARCHITECT/ENGINEER.

ELASTOMERIC HEAVY VEHICULAR TRAFFIC SYSTEM

1. APPLY SIKA CORPORATION SIKALASTIC 720/745 TRAFFIC SYSTEM OR APPROVAED EQUAL IN STRICT COMPLIANCE WITH MANUFACTURERS RECOMMENDATIONS.
2. COMPLY WITH MANUFACTURERS SURFACE PREPARATION, PRIMING, AND DETAILING RECOMMENDATIONS.
3. TOTAL THICKNESS OF HEAVY VEHICULAR TRAFFIC SYSTEM (EXCLUDING AGGREGATE) SHALL BE 55 MILS DFT.
4. PROVIDE MANUFACTURERS STANDARD AGGREGATE IN TWO TOP COATS FOR SLIP RESISTANCE.
5. TOP COAT COLOR SHALL BE AS SELECTED BY OWNER FROM STANDARD COLOR CHART.

FLOOR STRIPING

1. PROVIDE TWO (2) 4" WIDE WHITE PAINT STRIPES WITH SIDE HASH MARKS SIMILAR TO EXIISTING AND AS DIRECTED BY OWNER (APPROXIMATELY 100 LINEAL FEET TOTAL).

STRUCTURAL STEEL

1. CODES AND STANDARDS: AISC "CODE OF STANDARD PRACTICE FOR STEEL BUILDINGS AND BRIDGES;" AISC "SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS" INCLUDING "COMMENTARY;" AWS "STRUCTURAL WELDING CODE;" COMPLY WITH APPLICABLE PROVISIONS EXCEPT AS OTHERWISE INDICATED.
2. SHOP DRAWINGS: SHOW COMPLETE DETAILS AND SCHEDULES (IF REQUIRED) FOR FABRICATION, ASSEMBLY AND ERECTION. FURNISH ANCHOR BOLTS REQUIRED FOR INSTALLATION IN OTHER WORK; FURNISH TEMPLATES FOR BOLT INSTALLATION.
3. PROVIDE CERTIFICATION THAT WELDERS EMPLOYED IN WORK HAVE SATISFACTORILY PASSED AWS QUALIFICATION TESTS WITHIN 2 YEARS FOR TYPE OF WELDING TO BE PERFORMED.
4. STRUCTURAL STEEL SHALL BE AS FOLLOWS:

W, WT AND C SHAPES:	ASTM A992
OTHER SHAPES, BARS AND PLATES:	ASTM A36
STRUCTURAL TUBING:	ASTM A500, GRADE B
PIPE:	ASTM A 53, GRADE B OR ASTM A501

5. SHOP PAINT: TNEMEC 99 SERIES OR APPROVED EQUIVALENT.
6. BOLTS: ASTM A 325.
7. NON-SHRINK NON-METALLIC GROUT: ASTM C 1107, FACTORY-PACKAGED, NONMETALLIC AGGREGATE GROUT, NONCORROSIVE AND NONSTAINING, MIXED WITH WATER TO CONSISTENCY SUITABLE FOR APPLICATION AND A 30-MINUTE WORKING TIME.
8. FABRICATION: COMPLY WITH AISC "SPECIFICATIONS" AND FINAL SHOP DRAWINGS. MARK AND MATCH-MARK UNITS FOR FIELD ASSEMBLY.
9. CONNECTIONS: SHOP CONNECTIONS MAY BE WELDED OR BOLTED. USE HIGH-STRENGTH BOLTS FOR FIELD CONNECTIONS, EXCEPT AS OTHERWISE INDICATED. ALL CONNECTIONS SHALL BE TYPE 2 ANGLE FRAMING UNLESS SHOWN OTHERWISE.
10. COMPLY WITH AWS CODE FOR PROCEDURES, APPEARANCE, AND QUALITY OF WELDS.
11. SHOP PAINTING: PAINT STRUCTURAL STEEL WORK, EXCEPT MEMBERS OR PORTIONS OF MEMBERS EMBEDDED IN CONCRETE OR MORTAR AND CONTACT AREAS TO BE WELDED. CLEAN STEEL FREE OF LOOSE MILL SCALE, RUST, OIL AND GREASE. APPLY PRIME PAINT TO PROVIDE A MINIMUM DRY FILM THICKNESS OF 2.0 MILS.
12. ERECTION: COMPLY WITH AISC CODE AND SPECIFICATIONS, AND MAINTAIN WORK IN SAFE AND STABLE CONDITION DURING ERECTION. PROVIDE TEMPORARY BRACING AND SHORING AS REQUIRED; REMOVE WHEN FINAL CONNECTIONS PLACED. COMPLY WITH AWS "STRUCTURAL WELDING CODE" FOR ALL WELDING.
13. SET GROUT PLATES TO PROPER ELEVATIONS USING NON-SHRINK, NON-METALLIC GROUT.
14. TOUCH-UP PRIME PAINT AFTER ERECTION. CLEAN FIELD WELDS, BOLTED CONNECTIONS AND ABRADED AREAS AND APPLY SAME TYPE PAINT AS USED IN SHOP.

WOOD FRAMING

1. ALL WOOD CONSTRUCTION SHALL CONFORM TO THE REQUIREMENTS OF THE "NATIONAL DESIGN SPECIFICATION FOR WOOD CONSTRUCTION" BY THE NATIONAL FOREST PRODUCTS ASSOCIATION AND TO LOCAL BUILDING CODES.
2. ALL WOOD MEMBERS 2 X 6 AND LARGER SHALL BE SITKA SPRUCE OR SPRUCE-PINE-FIR NO. 2 GRADE AND BETTER EXCEPT WHERE NOTED AS FIR ON PLANS. WOOD MEMBERS NOTED AS FIR SHALL BE NO. 2 AND BETTER DOUGLAS FIR-LARCH.
3. WOOD MEMBERS 4 INCHES WIDE OR LESS SHALL BE SITKA SPRUCE OR SPRUCE-PINE-FIR NO. 2 GRADE OR BETTER.
4. ALL PRESSURE TREATED WOOD MEMBERS SHALL BE NO. 2 GRADE AND BETTER SOUTHERN PINE.
5. ALL STEEL BEAMS AND COLUMNS SHALL BE ADEQUATELY FASTENED OR BLOCKED TIGHT TO THE WOOD FRAME CONSTRUCTION IN ORDER TO PROVIDE LATERAL SUPPORT TO THE TOP FLANGE AT 24 INCHES O.C. STEEL COLUMNS SHALL BE BLOCKED TIGHT IN WOOD FRAMING AND ANCHORED AT THE TOP BY 2-5/8 INCH BOLTS OR LAG BOLTS.

EXISTING MECHANICAL AND ELECTRICAL SYSTEMS

1. EXISTING MECHANICAL AND ELECTRICAL SYSTEMS SHALL BE REROUTED OR REMOVED/REINSTALLED IN ACCORDANCE WITH APPLICALBLE CODES, STANDARDS AND REGULATIONS, ONLY TO THE EXTENT NECESSARY TO ALLOW THE STRUCTURAL WORK TO BE PERFORMED.

DESIGN CRITERIA

1. CODES: IBC 2012 AND ASCE 7-10, AS AMENDED BY 2012 VERMONT FIRE AND BUILDING SAFETY CODE
2. BUILDING OR STRUCTURE RISK CATEGORY: IV
3. FLOOR LOADS:
    - DEAD LOAD: 63 PSF W/O STEEL WEIGHT
    - HANGING LOAD: 7 PSF
    - LIVE LOAD: AASHTO H15 TRUCK LOADING (24,000 LBS. AXLE LOAD)

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PROFESSIONAL SEAL

STATE OF VERMONT · RICHARD W. DAY · No. 3417 · REGISTERED PROFESSIONAL ENGINEER

NO.	DESCRIPTION	DATE	BY	CK'D

BURLINGTON FIRE STATION NO. 3
20 MANSFIELD AVE.
BURLINGTON, VT

SHEET TITLE

TYPICAL DETAIL AND NOTES

DRAWN BY	DATE
LAR	07/10/14
CHECKED BY	D&K PROJECT #
RWD	522529L
PROJ. ENG.	D&K ARCHIVE #
RWD	

SHEET NUMBER

S2

SHEET 2 OF 2